IN THE CLAIMS

What is claimed is:

1. A polymer binder for a fibrous sheet comprising:

a resin system comprising a polyamidoamine-epihalohydrin resin and a polymer having repeating units derived from an alkyl halide having at least one double bond and an alkene; and

an anionic polymer.

2. The binder of claim 1, wherein the ratio of resin system to anionic polymer is between about 0.1:1 to 10:1 by weight.

3. The binder of claim 1, wherein the alkyl halide comprises a vinyl halide.

4. The binder of claim 1, wherein the alkyl halide comprises a vinyl halide and the alkene comprises an olefin.

5. The binder of claim 3, wherein the vinyl halide comprises vinyl chloride and the alkene comprises ethylene.

6. The binder of claim 1, wherein the alkyl halide comprises a vinyl halide and the alkene comprises ethylene.

7. The binder of claim 1, wherein the anionic polymer is a water soluble copolymer.

8. A method of forming a fibrous sheet comprising:

forming a fibrous slurry;

mixing into the fibrous slurry a resin system comprised of a polyamidoamine-epihalohydrin resin and a polymer having repeating units derived from an alkyl halide having at least one double bond and an alkene;

next mixing into the fibrous slurry an anionic polymer;

then forming the fibrous slurry into a fibrous sheet; and

drying the fibrous sheet.

9. The method of claim 8, wherein the ratio of added resin system to anionic polymer is between about 0.1:1 to about 10:1 by weight.

10. The method of claim 8, wherein the resin system is added to the fibrous slurry in an amount between about 1 pound to about 200 pounds per ton dry weight of fibrous slurry.

11. The method of claim 8, wherein the resin system is added to the fibrous slurry between about 5 pounds per ton to about 60 pounds per ton dry weight of fibrous slurry.

12. The method of claim 8, wherein the anionic polymer is added to the fibrous slurry in an amount between about 0.2 pound to about 100 pounds per ton dry weight of fibrous slurry.

13. The method of claim 8, wherein the anionic polymer is added to the fibrous slurry in an amount between about 2.5 pounds per ton to about 60 pounds per ton dry weight of fibrous slurry.

14. The method of claim 8, wherein the alkyl halide comprises a vinyl halide.

15. The method of claim 8, wherein the alkyl halide comprises a vinyl halide and the alkene comprises an olefin.

16. The method of claim 15, wherein the vinyl halide comprises vinyl chloride and the alkene comprises ethylene.

17. The method of claim 8, wherein the alkyl halide comprises a vinyl halide and the alkene comprises ethylene.

18. The method of claim 8, wherein the anionic polymer is a polyacrylamide copolymer.

19. A fibrous sheet comprising:

at least one type of fiber;

a resin system comprising a polyamidoamine-epihalohydrin resin and a polymer having repeating units derived from an alkyl halide having at least one double bond and an alkene; and

an anionic polymer.

20. The fibrous sheet of claim 19, wherein the ratio of added resin system to anionic polymer is between about 0.1:1 to about 10:1 by weight.

21. The fibrous sheet of claim 19, wherein the fiber is selected from the group consisting of cellulose, mineral fiber, fiberglass, and combinations thereof.

22. The fibrous sheet of claim 19, further including an organic binder comprising a starch.

23. The fibrous sheet of claim 19, further comprising a filler selected from the group consisting of perlite, clay calcium carbonate and combinations thereof.

24. The fibrous sheet of claim 19, wherein the alkyl halide comprises a vinyl halide and the alkene comprises ethylene.

25. The fibrous sheet of claim 19, wherein the anionic polymer is a water soluble copolymer.